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# Rules of Department of Labor and Industrial Relations

## Division 50—Division of Workers' Compensation Chapter 5—Determination of Disability

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**Title 8—DEPARTMENT OF  
LABOR AND  
INDUSTRIAL RELATIONS**

**Division 50—Workers' Compensation  
Chapter 5—Determination of Disability**

**8 CSR 50-5.010 Ratings for Loss of Teeth**

*PURPOSE: The purpose of this rule is to establish benefits due for loss of teeth.*

(1) Loss of teeth shall be rated as permanent partial disability and compensation shall be paid for the period set forth in the following table. Each cutting, eye or wisdom tooth shall be counted as one (1) tooth and each molar or grinding tooth as two (2) teeth.

(2) In addition to all other compensation, loss of front teeth only shall be rated as disfigurement in an amount sufficient to cover the reasonable cost of artificial teeth.

<b>Number of Teeth</b>	<b>Weeks Compensation</b>
1/8	.16
1/4	.31
1/3	.42
1/2	.63
2/3	.83
3/4	.94
7/8	1.09
1	1.25
2	2.50
3	3.75
4	5.00
5	6.25
6	7.50
7	8.75
8	10.00
9	11.25
10	12.50
11	13.75
12	15.00
13	16.25
14	17.50
15	18.75
16	20.00
17	21.25
18	22.50
19	23.75
20	25.00
21	26.25
22	27.50
23	28.75
24	30.00
25	31.25
26	32.50
27	33.75
28	35.00

<b>Number of Teeth</b>	<b>Weeks Compensation</b>
29	36.25
30	37.50
31	38.75
32	40.00
33	41.25
34	42.50
35	43.75
36	45.00
37	46.25
38	47.50
39	48.75
40	50.00
41	51.25
42	52.50
43	53.75
44	55.00
45	56.25
46	57.50
47	58.75
48	60.00

*AUTHORITY: section 287.650, RSMo 1986. \* Original rule filed Dec. 23, 1953, effective Jan. 3, 1954. Amended: Filed May 1, 1973, effective May 12, 1973.*

*\*Original authority: 287.650, RSMo 1939, amended 1949, 1961, 1980, 1993, 1995, 1998.*

**8 CSR 50-5.020 Evaluation of Visual Disabilities**

*PURPOSE: This rule sets forth procedures to evaluate visual disability.*

(1) Compensable disability for loss of vision should be based on that proportional part of the compensation provided by law for loss of use or loss of function of one (1) or of both eyes which expresses the percentage loss of visual efficiency of the individual.

(A) Visual acuity as used in this rule means the best acuity obtainable at twenty feet fourteen inches (20' 14") without the use of ophthalmic lenses, except that corrective lenses shall be used for natural presbyopia and other conditions clearly not the result of injury.

(B) Visual efficiency is defined as that degree or percentage of competence of the eye to accomplish its physiologic function.

(C) Loss of binocular single vision is equivalent to the loss of use of one (1) eye.

(D) The reduction in visual acuity to 20/200 (6/60 where the metric system is used) or a reduction in visual efficiency to ten percent (10%) or less constitutes industrial blindness.

(E) When both eyes are involved in a permanent visual disability, the efficiency of the

coordinate function of both eyes should be determined on the basis of permanent partial disability of the body as a whole.

(2) There are three (3) elements of vision, each of which has an interdependent and coordinate relation to full visual efficiency. These coordinate factors are acuteness of vision (central visual acuity), field of vision and muscle function. Although these factors do not possess an equal degree of importance, no act of vision is perfect without the coordinate action of all. Other functions, though secondary and dependent, are recognized as important, such as, for instance, depth perception, stereoscopic vision, fusion sense, color perception, adaptation to light and dark and accommodation. These secondary functions are inherently dependent on the status of the three (3) primary coordinate functions of vision and they also depend upon the condition of the central nervous system.

(3) In order to determine the various degrees of visual efficiency, a) normal or maximum, and b) minimum limits for each coordinate function must be established, that is, the one hundred percent (100%) point and the zero percent (0%) point.

(A) The maximum efficiency for each of these is established by existing and accepted standards.

1. Central visual acuity. The ability to recognize letters or characters with subtend an angle of five (5) minutes, each unit part of which subtends a one (1) minute angle, is accepted as standard. Therefore a 20/20 (6/6 metric) Snellen is employed as the maximum acuity of central vision or one hundred percent (100%) acuity.

2. Field vision. A visual field having an area which extends from the point of fixation outward eighty-five degrees (85°), down and out eighty-five degrees (85°), down sixty-five degrees (65°), down and in fifty degrees (50°), inward sixty degrees (60°), in and up fifty-five degrees (55°), upward forty-five degrees (45°), and up and out fifty-five degrees (55°) is accepted as one hundred percent (100%) industrial visual field efficiency.

3. Muscle function. A maximum normal muscle function is present when binocular single vision is present in all parts of the field of binocular fixation or when there is no limitation of motion in either eye.

(B) The minimum limit or the zero percent (0%) of each of the coordinate functions of vision is established as that degree of deficiency which reduces vision to a state of usefulness.

1. Central visual acuity. Experience, experiment and authoritative opinion establish that a distance central visual acuity of 20/200 Snellen and a near central visual acuity of 14/140 is the accepted threshold of industrial blindness.

2. Field of vision. The minimum limit for this function is established as a concentric central contraction of the visual field to five degrees (5°). This degree of contraction of the visual field reduces the visual efficiency to zero (0).

3. Muscle function. The minimum limit for this function is established by the presence of diplopia in all parts of the motor field, the loss of binocular single vision or inability to rotate the eye to any point of fixation in the normal motor field. These conditions constitute zero visual efficiency.

**TABLE NO. 1**

**Percentage Loss of Visual Efficiency Corresponding to Snellen Notations for Distant and for Near Vision for Measurable Range of Quantitative Visual Acuity Using 20/200 = 100% Loss**

Snellen Notation at 20 feet or 6 m	Snellen at 14 inches	Percent-age of Visual Efficiency Retained	Percent-age of Visual Efficiency Loss
20/20	14/14	100.0	0.0
20/25	14/17.5	94.0	6.0
20/30	14/21	88.0	12.0
20/35	14/24.5	82.4	17.6
20/40	14/28	77.4	22.6
20/45	14/31.5	72.8	27.2
20/50	14/35	68.1	31.9
20/60	14/42	60.0	40.0
20/70	14/49	52.5	47.5
20/80	14/56	46.4	53.6
20/90	14/63	41.2	58.8
20/100	14/70	35.9	64.1
20/120	14/84	27.8	72.2
20/140	14/98	20.2	79.8
20/160	14/112	13.0	87.0
20/180	14/126	6.0	94.0
20/200	14/140	0.0	100.0

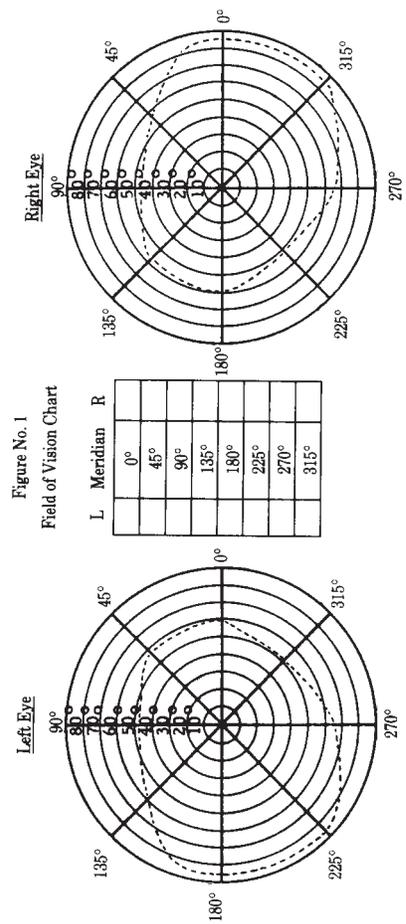
(4) Visual acuity shall be measured both for distance and for near, using the Snellen notation, each eye being measured separately. Central visual acuity for distance shall be measured at a test distance of twenty feet (20') or six meters (6 m). Central visual acuity for near shall be measured at a test distance of fourteen inches (14") or thirty-five centimeter (35 cm). The best central visual acuity obtainable without the use of

ophthalmic lenses shall be used in determining the degree of visual efficiency, except when natural presbyopia or other conditions clearly not the result of injury exist; then it is permissible to measure the visual acuity both for distance and near with correction. As an example, a high myopia with a vision without correction of 20/200 or less in each eye should be measured with the best corrective lenses, using the best vision of the uninjured eye as a standard. The practical difficulties of fitting, expense of and tolerance of wearing contact lenses are too great at the present time to favor the use of other than regular ophthalmic lenses to determine the best corrected vision. Having determined the best visual acuity for twenty feet fourteen inches (20'14"), the visual efficiency is ascertained by the weighted values assigned for central visual acuity at twenty feet (20') and central acuity at fourteen inches (14"). A one-fold value is given the distance vision and a two-fold value is given for near vision. As an example: best visual acuity twenty feet (20'), 20/40; best visual acuity fourteen inches (14"), 14/35. Reference to Table No. 1 shows 20/40 equals 77.4 retained visual acuity and 14/35 equals 68.1 retained visual acuity. Thus the visual acuity efficiency for one eye would be ((77.4 × 1) plus (68.1 × 2)) divided by 3 equals .712 or 71.2% visual acuity efficiency (or a 28.8% loss).

(5) The extent of the field of vision shall be determined by the use of the usual perimetric test methods, a white target being employed which subtends a one degree (1°) angle under illumination of not less than seven (7) foot-candles and the result plotted on an ordinary visual field chart as shown on Figure No. 1.

(A) Normal Field. A visual field having an area which extends from the point of fixation outward eighty-five degrees (85°), down and temporally eighty-five degrees (85°), down sixty-five degrees (65°), down and nasally fifty degrees (50°), nasally sixty degrees (60°), up and nasally fifty-five degrees (55°), up forty-five degrees (45°), up and temporally fifty-five degrees (55°), giving a total of five hundred (500) is established as a normal field of vision.

(B) An Abnormal Field. The amount of radial contraction in the eight (8) field sectors, measured in their principal meridians, shall be determined. The sum in degrees of the eight (8) principal radii of the visual field (which normally is five hundred (500)) will give the visual field efficiency of one (1) eye in percent when divided by 5.00.



NOTE: The normal field of each eye is indicated by the dotted outline

Example: The following represent the findings in an abnormal field of vision in one (1) eye

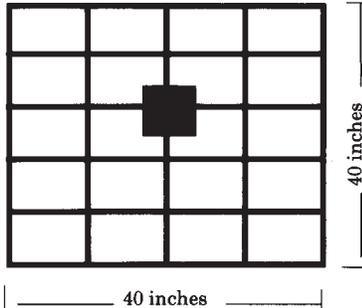
Upward	40 degrees
Up and Out	40 degrees
Outward	70 degrees
Down and Out	60 degrees
Down	50 degrees
Down and In	50 degrees
In	45 degrees
Up and In	35 degrees
<b>TOTAL</b>	<b>390 5.00 78%</b>

which is the field of vision efficiency of the affected eye. (See Field of Vision Chart).

(6) Muscle function shall be measured in all parts of the motor field, recognized methods being used for testing. A maximum normal extraocular muscle function is present when there is absence of diplopia (double vision) in all parts of the field of binocular fixation. Where diplopia is present, it shall be plotted on the motor field chart. This chart is divided into twenty (20) rectangles twenty by twenty-five degrees (20° × 25°) in size, as shown in Figure No. 2.



**Figure No. 2**  
**Industrial Motor Field Chart**



Motor field chart at 40 inches is approximately 40 inches square, and the 20 rectangles measure 8 inches by 10 inches.

The partial loss of muscle function due to diplopia is that proportional area which shows diplopia, as indicated on the plotted chart, compared with the entire motor field area. It shall be measured without corrective lenses, red glass or prism. For example, to determine the motor field efficiency of the eyes, assume the motor field chart shows a diplopia in eight (8) out of twenty (20) rectangles of the entire field. By referring to the Motor Field Chart, Figure No. 2 and Table No. 2, it is found that a loss of 8/20 gives a forty percent (40%) motor field loss or an efficiency of sixty percent (60%).

**TABLE NO. 2**

Loss in Muscle Function		Loss	Retained
1/20	=	5%	95%
2/20	=	10%	90%
3/20	=	15%	85%
4/20	=	20%	80%
5/20	=	25%	75%
6/20	=	30%	70%
7/20	=	35%	65%
8/20	=	40%	60%
9/20	=	45%	55%
10/20	=	50%	50%
11/20	=	55%	45%
12/20	=	60%	40%
13/20	=	65%	35%
14/20	=	70%	30%
15/20	=	75%	25%
16/20	=	80%	20%
17/20	=	85%	15%
18/20	=	90%	10%
19/20	=	95%	5%
20/20	=	100%	0%

(7) The industrial visual efficiency of one (1) eye is determined by obtaining the product of the computed coordinate efficiency values of central visual acuity of field vision and of muscle function. Thus, if central visual acuity efficiency is forty percent (40%), visual field efficiency is eighty-one percent (81%) and the muscle function efficiency is one hundred percent (100%), the resultant visual efficiency of the eye will be  $0.40 \times 0.81 \times 1.00$  equal 32.4% (a loss of 67.6%). Should the motor efficiency be reduced fifty percent (50%) in the example given, the visual efficiency would be  $0.40 \times 0.81 \times 0.50$  equal 16.2% (a loss of 83.3%).

(8) It is a fact, established by common experience, that visual efficiency is by no means reduced to one-half (1/2) by the complete loss of one (1) eye, the vision in the fellow eye remaining normal; and it is also a fact that a permanent visual disability, total or partial, involving both eyes is not equivalent to the sum of the visual disabilities computed separately for each eye. Hence, the necessity arises to give a weighted average when a permanent binocular disability is present. For the complete loss of the sight of one (1) eye, the Missouri Workers' Compensation Law allows one hundred forty (140) weeks; when there is permanent partial loss in both eyes, the disability evaluation is on the basis of four hundred (400) weeks (disability to the body as a whole). It should be noted that when an employee has sustained a permanent partial disability involving both eyes and a part of this disability is due to a loss in the binocular motor fields (determined by the area of diplopia), the loss of motor field efficiency is used only in computing the loss in the less efficient of the two (2) eyes. Therefore, the estimation of visual efficiency in the more efficient of the two (2) eyes is determined by using only the factors of central visual acuity and the field of vision efficiency. The formula for computing binocular visual efficiency loss in weeks is as follows: To the loss of visual efficiency of the poorer eye in weeks (based on the percentage of value of one (1) eye in weeks, one hundred and forty (140) being the basis) add the loss of visual efficiency of the second eye in weeks (based on the percentage of the difference between the value of one (1) eye in weeks and the value of both eyes in weeks, that is, four hundred (400) less one hundred forty (140) or two hundred sixty (260) weeks). For examples: poorer eye (right eye), seventy-five percent (75%) loss,  $140 \times .75 = 105$  weeks; second eye (left eye), five percent (5%) loss,  $260 \times .05 = 13$  weeks; binocular visual efficiency, loss one hundred eighteen (118) weeks.

(9) Certain types of ocular disturbance are not included in the foregoing computations and these may result in disabilities, the value of which cannot be accurately measured by any scientific method available. Among them are disturbance of accommodation, of color vision, of adaptation to light and dark, metamorphopsia, entropion, ectropion, lagophthalmos, epiphora and muscle disturbances not included under diplopia. For such disabilities, additional compensation shall be allowed, but in no case shall such additional compensation make the total for loss in industrial visual efficiency greater than that provided by law for the total loss of the sight of one (1) eye when only one (1) eye is involved and that for permanent partial disability of the body as a whole when both eyes are involved.

(A) Compensation for loss in industrial visual efficiency, as provided for previously in this rule, does not include compensation for any cosmetic defect, for mental or physical suffering, for cost of medical attention or for time lost from gainful occupation during the period of treatment previous to final computation of compensation as provided for in the following subsections. Additional compensation should be allowed for the various losses hereinafter enumerated.

(B) Defects of form or structure of the eye, congenital or developmental in origin, such as regular astigmatism, myopia, hyperopia and presbyopia will not in themselves be regarded as traumatic in origin.

(C) Irregular astigmatism may be due to corneal scars, inflammation, injury or operation and is compensable if it is.

(D) Combined ratings of disabilities of the same eye shall not exceed the amount for total loss of sight of that eye. However, any cosmetic defect shall be noted in the report.

(E) Although no scientific deductions can as yet be made as a basis for determining disabilities arising from those secondary ocular defect not included in the foregoing computations in the three (3) primary and coordinate factors of vision, experience and sound judgment, as expressed in the following table, give a yardstick for estimating losses due to so-called secondary ocular disabilities.

(F) Compensable disability shall not be computed until all adequate and reasonable operations and treatment known to medical science have been offered to correct the defect. Final examination on which compensation is to be based shall not be made until at least three (3) months shall have elapsed after all visible evidences of inflammation have disappeared, except in cases of disturbance of extrinsic ocular muscles, optic nerve atrophy, sympathetic ophthalmia, traumatic cataract and paralysis of accommodation; in such cases at least twelve (12) months and



preferably not more than sixteen (16) months shall intervene before the examination shall be made on which final compensable disability is to be computed.

(G) In cases of additional loss in visual efficiency when it is known by the examining physician that there was present a pre-existing subnormal vision, compensable disability shall be based on the loss incurred as a result of eye injury or occupational condition specifically responsible for the additional loss. In cases in which there exists no record or no adequate and positive evidence of pre-existing subnormal vision, it shall be assumed that the visual efficiency prior to any injury was one hundred percent (100%) or at least equal to the visual efficiency of the uninjured eye.

TABLE NO. 3  
TYPES OF OCULAR INJURY  
NOT INCLUDED IN THE  
DISTURBANCE OF COORDINATE  
FACTORS

(The percentages are for unilateral losses unless otherwise noted)

Disability	Approximate Rating Not to Exceed
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Traumatic Cataract:

When a traumatic cataract has been successfully treated by surgical or medical methods, the best visual acuity for that eye with ophthalmic lenses shall be measured. Fifty percent (50%) of this best visual acuity efficiency with an ophthalmic lens shall represent the central visual acuity efficiency of the eye for rating purposes.

Dislocation of Lens—Traumatic:

Partial—Withhold rating for 12 months; then rate as visual loss plus 50% (not to exceed 100%).

Total—The loss shall be 100% unless the lens has been successfully removed by surgery or has been absorbed. When the lens has been successfully removed by surgery or has been absorbed, the eye shall be rated as an eye where a traumatic cataract has been removed. See: "Traumatic Cataract" preceding.

Disability	Approximate Rating Not to Exceed
Ptosis	Loss is visual efficiency Loss
Iridectomy —Traumatic or surgical resulting	With photo- phobia or dazzling 30%

Scotoma —Traumatic	If not cen- trally located	10%
Paralysis of Accom- modation	Unilateral *Bilateral	20% See footnote
Eye Brow (complete loss of)	Unilateral *Bilateral	10% See footnote
Eye Lashes (complete loss of)	Unilateral *Bilateral	10% See footnote
Symble- pharon (also limited muscle function)	Unilateral *Bilateral	10% See footnote
Ectropion or Entropion	Unilateral *Bilateral	10% See footnote
Lagophthalmus *Bilateral	Unilateral See footnote	10%
Epiphora *Bilateral	Unilateral See footnote	10%

\* In the event of bilateral disabilities due to paralysis of accommodation, loss of eye brows, loss of eye lashes, symblepharon, ectropion, entropion, lagophthalmus or epiphora, the percentage of unilateral loss in the poorer eye shall be taken of 140 weeks and to that shall be added the percentage of unilateral loss in the better eye taken of 260 weeks. (See section (9) for computation of binocular visual efficiency).

(10) When an employee, who has a permanent partial visual disability whether from a compensable injury or otherwise, subsequently receives a compensable injury resulting in additional permanent partial visual disability, the examining doctor shall then determine, as nearly as possible, the permanent disability caused by the last injury and set forth that percentage loss in his/her report. The employer is liable only for the visual loss due to the second injury, taken alone, and the Second Injury Fund is liable for additional disability if it is in excess of the mere sum of all the disabilities.

(11) In each case of eye injury resulting in any degree of permanent disability, the employer and insurer shall file Form 9-A, Physician's Report on Eye Injuries, completed in all the detail the form asks for, as promptly as possible. If the Form 9-A shows final estimation of the visual disabilities, it may be used as a basis for computing the compensation due the injured worker.

*AUTHORITY: section 287.650, RSMo 1986.\* Original rule filed Dec. 23, 1953, effective Jan. 3, 1954. Amended: Filed Nov. 1, 1956, effective Nov. 12, 1956. Amended: Filed June 19, 1958, effective June 30, 1958. Amended: Filed Sept. 4, 1963, effective Sept. 15, 1963.*

*\*Original authority: 287.650, RSMo 1939, amended 1949, 1961, 1980, 1993, 1995, 1998.*

8 CSR 50-5.030 Present Worth Table

*PURPOSE: The purpose of this rule is to present the commutable value of compensation for permanent partial disability and the death benefit, excluding widows.*

This table gives the present value of one dollar (\$1) per week with compound interest at four percent (4%). It is used to compute the commutable value of compensation for permanent partial disability and the death benefit other than to widow only. Source for the larger part of the table is *Workers' Compensation Law* by William R. Schneider, who gave permission for its use.



## PRESENT WORTH TABLE

Weeks	Present Worth	Weeks	Present Worth	Weeks	Present Worth
0		8	\$ 56.7283	6	\$ 111.0284
1	\$ 00.9992	9	57.6847	7	111.9439
2	1.9977	60	58.6405	8	112.8588
3	2.9955	1	59.5955	9	113.7729
4	3.9925	2	60.5499	120	114.6864
5	4.9887	3	61.5035	1	115.5992
6	5.9842	4	62.4563	2	116.5112
7	6.9789	5	63.4085	3	117.4226
8	7.9739	6	64.3599	4	118.3334
9	8.9661	7	65.3107	5	119.2434
10	9.9586	8	66.2607	6	120.1527
1	10.9503	9	67.2100	7	121.0614
2	11.9413	70	68.1585	8	121.9694
3	12.9316	1	69.1064	9	122.8766
4	13.9211	2	70.0536	130	123.7832
5	14.9098	3	71.0000	1	124.6892
6	15.8978	4	71.9457	2	125.5944
7	16.8851	5	72.8907	3	126.4989
8	17.8716	6	73.8350	4	127.4028
9	18.8574	7	74.7786	5	128.3060
20	19.8424	8	75.7215	6	129.2085
1	20.8267	9	76.6636	7	130.1103
2	21.8102	80	77.6051	8	131.0115
3	22.7930	1	78.5458	9	131.9119
4	23.7751	2	79.4858	140	132.8117
5	24.7564	3	80.4252	1	133.7108
6	25.7370	4	81.3638	2	134.6092
7	26.7168	5	82.3017	3	135.5070
8	27.6959	6	83.2389	4	136.4041
9	28.6743	7	84.1754	5	137.3005
30	29.6519	8	85.1112	6	138.1962
1	30.6288	9	86.0462	7	139.0913
2	31.6050	90	86.9806	8	139.9856
3	32.5804	1	87.9142	9	140.8794
4	33.5550	2	88.8471	150	141.7724
5	34.5200	3	89.7794	1	142.6648
6	35.5022	4	90.7109	2	143.5564
7	36.4747	5	91.6418	3	144.4474
8	37.4464	6	92.5719	4	145.3378
9	38.4174	7	93.5014	155	146.2274
40	39.3877	8	94.4301	6	147.1164
1	40.3572	9	95.3581	7	148.0048
2	41.3261	100	96.2855	8	148.8924
3	42.2942	1	97.2122	9	149.7794
4	43.2615	2	98.1381	160	150.6657
5	44.2281	3	99.0633	1	151.5514
6	45.1940	4	99.9879	2	152.4363
7	46.1592	5	100.9118	3	153.3207
8	47.1237	6	101.8349	4	154.2043
9	48.0874	7	102.7574	165	155.0873
50	49.0504	8	103.6792	6	155.9696
1	50.1027	9	104.6002	7	156.8512
2	50.9742	110	105.5206	8	157.7322
3	51.9350	1	106.4403	9	158.6126
4	52.8951	2	107.3593	170	159.4922
5	53.8545	3	108.2776	1	160.3712
6	54.8131	4	109.1952	2	161.2495
7	55.7711	5	110.1122	3	162.1272



PRESENT WORTH TABLE

Weeks	Present Worth	Weeks	Present Worth	Weeks	Present Worth
4	\$ 163.0042	2	\$ 212.7554	290	\$ 260.3771
175	163.8806	3	213.5942	1	261.1801
6	164.7563	4	214.4324	2	261.9824
7	165.6313	235	215.2700	3	262.7841
8	166.5057	6	216.1069	4	263.5853
9	167.3794	7	216.9432	295	264.3858
180	168.2524	8	217.7789	6	265.1857
1	169.1248	9	218.6139	7	265.9850
2	169.9966	240	219.4484	8	266.7837
3	170.8676	1	220.2821	9	267.5818
4	171.7380	2	221.1158	300	268.3793
185	172.6078	3	221.9478	1	269.1762
6	173.4769	4	222.7797	2	269.9725
7	174.3454	245	223.6110	3	270.7682
8	175.2132	6	224.4417	4	271.5633
9	176.0803	7	225.2717	305	272.3578
190	176.9468	8	226.1011	6	273.1516
1	177.8126	9	226.9299	7	273.9449
2	178.6778	250	227.7580	8	274.7376
3	179.5424	1	228.5856	9	275.5297
4	180.4063	2	229.4125	310	276.3212
195	181.2695	3	230.2387	1	277.1121
6	182.1321	4	231.0644	2	277.9024
7	182.9940	255	231.8894	3	278.6921
8	183.8553	6	232.7139	4	279.4812
9	184.7159	7	233.5377	315	280.2698
200	185.5758	8	234.3608	6	281.0577
1	186.4352	9	235.1834	7	281.8450
2	187.2938	260	236.0053	8	282.6317
3	188.1519	1	236.8266	9	283.4179
4	189.0093	2	237.6473	320	284.2034
205	189.8660	3	238.4674	1	284.9884
6	190.7221	4	239.2868	2	285.7727
7	191.5775	265	240.1056	3	286.5565
8	192.4323	6	240.9238	4	287.3397
9	193.2865	7	241.7414	325	288.1223
210	194.1400	8	242.5584	6	288.9043
1	194.9929	9	243.3748	7	289.6857
2	195.8451	270	244.1905	8	290.4666
3	196.6967	1	245.0056	9	291.2468
4	197.5476	2	245.8202	330	292.0265
215	198.3980	3	246.6341	1	292.8055
6	199.2476	4	247.4474	2	293.5840
7	200.0966	275	248.2600	3	294.3619
8	200.9450	6	249.0721	4	295.1302
9	201.7928	7	249.8836	335	295.9160
220	202.6398	8	250.6944	6	296.6921
1	203.4863	9	251.5047	7	297.4677
2	204.3321	280	252.3143	8	298.2426
3	205.1773	1	253.1233	9	299.0170
4	206.0219	2	253.9317	340	299.7908
225	206.8658	3	254.7395	1	300.5641
6	207.7090	4	255.5467	2	301.3367
7	208.5517	285	256.3533	3	302.1088
8	209.3937	6	257.1593	4	302.8802
9	210.2351	7	257.9647	345	303.6511
230	211.0758	8	258.7694	6	304.4214
1	211.9159	9	259.5736	7	305.1912



## PRESENT WORTH TABLE

Weeks	Present Worth	Weeks	Present Worth	Weeks	Present Worth
8	\$ 305.9603	6	\$ 349.5926	4	\$ 391.3571
9	306.7289	7	350.3282	465	392.0613
350	307.4969	8	351.0633	6	392.7650
1	308.2643	9	351.7979	7	393.4681
2	309.0311	410	352.5319	8	394.1707
3	309.7974	1	353.2653	9	394.8727
4	310.5630	2	353.9982	470	395.5742
355	311.3281	3	354.7306	1	396.2752
6	312.0926	4	355.4624	2	396.9757
7	312.8566	415	356.1936	3	397.6757
8	313.6200	6	356.9243	4	398.3751
9	314.3827	7	357.6544	475	399.0740
360	315.1450	8	358.3840	6	399.7723
1	315.9066	9	359.1131	7	400.4702
2	316.6677	420	359.8416	8	401.1675
3	317.4282	1	360.5695	9	401.8642
4	318.1881	2	361.2969	480	402.5605
365	318.9474	3	362.0237	1	403.2562
6	319.7062	4	362.7500	2	403.9514
7	320.4644	425	363.4758	3	404.6461
8	321.2220	6	364.2010	4	405.3403
9	321.9791	7	364.9256	485	406.0339
370	322.7356	8	365.6497	6	406.7270
1	323.4915	9	366.3733	7	406.4196
2	324.2468	430	367.0963	8	408.1117
3	324.0016	1	367.8188	9	408.8032
4	325.7558	2	368.5407	490	409.4943
375	326.5094	3	369.2621	1	410.1848
6	327.2625	4	369.9829	2	410.8747
7	328.0150	435	370.7032	3	411.5642
8	328.7669	6	371.4230	4	412.2531
9	329.5183	7	372.1422	495	412.9416
380	330.2691	8	372.8608	6	413.6295
1	331.0194	9	373.5790	7	414.3169
2	331.7690	440	374.2966	8	415.0037
3	332.5181	1	375.0136	9	415.6901
4	333.2667	2	375.7301	500	416.3759
385	334.0147	3	376.4461	1	417.0612
6	334.7621	4	377.1615	2	417.7460
7	335.5089	445	377.8764	3	418.4303
8	336.2552	6	378.5907	4	419.1141
9	337.0010	7	379.3045	505	419.7973
390	337.7461	8	380.1078	6	420.4801
1	338.4907	9	380.7305	7	421.1623
2	339.2348	450	381.4427	8	421.8440
3	339.9782	1	382.1543	9	422.5252
4	340.7212	2	382.8654	510	423.2059
395	341.4635	3	383.5760	1	423.8860
6	342.2053	4	384.2860	2	424.5657
7	342.9466	455	384.9958	3	425.2448
8	343.6872	6	385.7045	4	425.9234
9	344.4274	7	386.4130	515	426.6016
400	345.1669	8	387.1209	6	427.2792
1	345.9059	9	387.8282	7	427.9562
2	346.6444	460	388.5351	8	428.6328
3	347.3823	1	389.2414	9	429.3089
4	348.1106	2	389.9472	520	429.9845
405	348.8564	3	390.6524	1	430.6606



PRESENT WORTH TABLE

Weeks	Present Worth	Weeks	Present Worth	Weeks	Present Worth
2	\$ 431.3351	580	\$ 469.6008	8	\$ 506.2285
3	432.0091	1	470.2460	9	506.8461
4	432.6826	2	470.8907	640	507.4632
525	433.3556	3	471.5349	1	508.0798
6	434.0281	4	472.1786	2	508.6960
7	434.7001	585	472.8218	3	509.3117
8	435.3716	6	473.4646	4	509.9269
9	436.0426	7	474.1069	645	510.5417
530	436.7131	8	474.7487	6	511.1560
1	437.3831	9	475.3900	7	511.7699
2	438.0526	590	476.0308	8	512.3833
3	438.7216	1	476.6711	9	512.9962
4	439.3901	2	477.3110	650	513.6087
535	440.0581	3	477.9504	1	514.2207
6	440.7256	4	478.5893	2	514.8322
7	441.3926	595	479.2277	3	515.4433
8	442.0591	6	479.8656	4	516.0539
9	442.7251	7	480.5030	655	516.6641
540	443.3905	8	481.1400	6	517.2738
1	444.0554	9	481.7765	7	517.8830
2	444.7198	600	482.4125	8	518.4918
3	445.3837	1	483.0480	9	519.1001
4	446.0471	2	483.6830	660	519.7080
545	446.7100	3	484.3176	1	520.3154
6	447.3724	4	484.9517	2	520.9223
7	448.0343	605	485.5853	3	521.5288
8	448.6957	6	486.2184	4	522.1348
9	449.3566	7	487.8511	665	522.7404
550	450.0170	8	487.4833	6	523.3455
1	450.6769	9	488.1150	7	523.9502
2	451.3364	610	488.7462	8	524.5544
3	451.9954	1	489.3769	9	525.1581
4	452.6539	2	490.0072	670	525.7614
555	453.3119	3	490.6370	1	526.3642
6	453.9694	4	491.2663	2	526.9666
7	454.6264	615	491.8951	3	527.5685
8	455.2829	6	492.5235	4	528.1700
9	455.9389	7	493.1514	675	528.7710
560	456.5944	8	493.7788	6	529.3716
1	457.2494	9	494.4058	7	529.9717
2	457.9039	620	495.0323	8	530.5714
3	458.5579	1	495.6583	9	531.1706
4	459.2114	2	496.2838	680	531.7694
565	459.8644	3	496.9089	1	532.3677
6	460.5169	4	497.5335	2	532.9656
7	461.1689	625	498.1576	3	533.5630
8	461.8204	6	498.7813	4	534.1600
9	462.4715	7	499.4045	685	534.7565
570	463.1221	8	500.0272	6	535.3526
1	463.7722	9	500.6494	7	535.9482
2	464.4218	630	501.2712	8	536.5434
3	465.0709	1	501.8925	9	537.1381
4	465.7195	2	502.5133	690	537.7324
575	466.3676	3	503.1337	1	538.3262
6	467.0152	4	503.7536	2	538.9196
7	467.6623	635	504.3730	3	539.5125
8	468.3089	6	504.9920		
9	468.9551	7	505.6105		



*AUTHORITY: section 287.650, RSMo 1986.\* Original rule filed Dec. 23, 1953, effective Jan. 3, 1954. Amended: Filed May 1, 1973, effective May 12, 1973.*

Department. It is used to compute death benefits payable to widows only.

*\*Original authority: 287.650, RSMo 1939, amended 1949, 1961, 1980, 1993, 1995, 1998.*

### 8 CSR 50-5.040 Present Value Table for Widows

*PURPOSE: The purpose of this rule is to compute death benefits paid to widows only.*

This table gives the annual present value of one dollar (\$1) per week payable weekly, to the end of the period until remarriage or death, the first payment immediate compiled from the Danish Annuitants and Dutch Remarriage Tables with interest at four percent (4%), by Theodore Stalzer, formerly assistant actuary of the Missouri Insurance

PRESENT VALUE TABLE FOR WIDOWS

Age	1	2	3	4	5	6	7	8	9	10	11	12	13
15	\$47.84	\$88.45	\$122.72	\$151.80	\$176.51	\$197.59	\$215.60	\$231.05	\$244.35	\$255.83	\$265.79	\$274.46	\$282.05
16	47.99	88.60	123.04	152.33	177.29	198.64	216.94	232.69	246.27	258.10	268.37	277.36	285.26
17	48.03	88.77	123.40	152.93	178.17	199.82	218.45	234.54	248.57	260.64	271.27	280.61	288.85
18	48.08	88.96	123.80	153.60	179.15	201.14	220.13	236.60	250.93	263.47	274.50	284.23	292.85
19	48.13	89.17	124.17	154.25	180.22	202.58	221.98	238.86	253.63	266.61	278.06	288.23	297.28
20	48.20	89.40	124.74	155.13	181.42	204.19	224.03	241.26	256.39	269.84	281.78	292.42	301.95
21	48.26	89.83	125.28	156.04	182.72	206.05	226.36	244.22	259.98	273.96	286.42	297.59	307.63
22	48.34	89.93	125.86	157.02	184.15	207.88	228.73	247.13	263.46	278.01	291.04	302.78	313.39
23	48.42	90.24	126.51	158.08	185.70	209.64	230.73	249.81	266.68	281.85	295.51	307.86	319.09
24	48.50	90.56	127.19	159.22	187.37	212.21	234.25	253.90	271.50	287.33	301.66	314.68	326.56
25	48.59	90.91	127.92	160.44	189.15	214.61	237.31	257.64	275.94	292.49	307.53	321.26	333.84
26	48.69	91.28	128.70	161.73	191.01	217.15	240.55	261.62	280.65	297.98	313.75	328.22	341.55
27	48.79	91.71	129.52	163.08	193.00	219.81	243.91	265.76	285.58	303.68	320.26	335.53	349.62
28	48.90	92.07	130.36	164.49	195.07	222.60	247.48	270.09	290.73	309.65	327.08	343.13	358.03
29	49.01	92.45	131.24	165.95	197.19	225.46	251.13	274.56	296.04	315.80	334.05	350.96	366.69
30	49.12	92.91	132.14	167.44	199.37	228.38	254.86	279.12	301.45	322.07	341.18	358.95	375.53
31	49.24	93.34	133.04	168.94	201.56	231.33	258.26	283.02	306.21	327.70	347.68	366.31	383.73
32	49.35	93.77	133.94	170.44	203.75	234.28	262.37	288.32	312.36	334.72	355.57	375.01	393.33
33	49.46	94.19	134.84	171.93	205.93	237.21	266.20	292.98	317.77	340.98	362.68	383.02	402.11
34	49.57	94.61	135.72	173.39	208.06	240.07	269.74	297.33	323.05	347.10	369.63	390.79	410.70
35	49.68	95.02	136.57	174.80	210.12	242.84	273.28	301.64	328.17	353.02	376.35	398.30	410.98
36	49.78	95.40	137.39	176.16	212.10	245.51	276.66	305.79	333.08	358.70	382.79	405.50	426.92
37	49.88	95.78	138.17	177.46	213.99	247.58	279.89	309.72	337.73	364.08	388.90	412.37	434.42
38	49.97	96.13	138.90	178.67	215.76	250.42	282.90	313.40	342.08	369.11	394.59	418.66	441.41
39	50.06	96.45	139.58	179.81	217.40	252.63	285.70	316.81	346.11	373.76	399.86	424.53	447.86
40	50.14	96.75	140.22	180.85	218.92	254.67	288.29	319.97	349.84	378.05	404.71	429.92	453.78
41	50.21	97.01	140.77	181.80	220.31	256.52	290.64	322.81	353.20	381.91	409.06	434.76	459.08
42	50.28	97.25	141.32	182.66	221.55	258.19	292.74	325.37	356.21	385.36	412.95	439.07	463.78
43	50.34	97.50	141.78	183.44	222.67	259.68	294.62	327.67	358.88	388.43	416.39	442.86	467.91
44	50.39	97.70	142.20	184.12	223.66	260.99	296.28	329.65	361.22	391.08	419.35	446.11	471.43
45	50.43	97.87	142.56	184.71	224.50	262.12	297.68	331.33	363.18	393.32	421.84	448.83	474.35



Age	1	2	3	4	5	6	7	8	9	10	11	12	13
46	50.48	98.02	142.87	185.22	225.24	263.09	298.90	332.78	364.85	395.20	423.91	451.07	476.74
47	50.51	98.15	143.14	185.65	225.86	263.89	299.89	333.95	366.19	396.70	425.54	452.80	478.55
48	50.54	98.26	143.36	186.01	226.36	264.54	300.68	334.88	367.23	397.83	426.75	454.06	479.83
49	50.55	98.34	143.53	186.28	226.74	265.02	301.26	335.54	367.95	398.59	427.53	454.83	480.56
50	50.58	98.42	143.67	186.50	227.03	265.39	301.70	335.99	368.43	399.06	427.95	455.18	480.81
51	50.59	98.46	143.76	186.63	227.20	265.58	301.88	336.19	368.59	399.15	427.90	455.05	480.52
52	50.60	98.49	143.81	186.70	227.28	265.65	301.92	336.16	368.47	398.92	427.52	454.44	479.75
53	50.61	98.50	143.83	186.72	227.27	265.59	301.79	335.93	368.11	398.39	426.83	453.52	478.48
54	50.60	98.49	143.80	186.64	227.14	265.40	301.45	335.40	367.44	397.49	425.68	452.09	450.24
55	50.60	98.48	143.75	186.54	226.95	265.07	300.99	334.80	366.56	396.35	424.22	476.69	474.48
56	50.59	98.44	143.65	186.46	226.64	264.60	300.32	333.88	365.36	394.80	422.30	447.92	471.70
57	50.58	98.38	143.52	186.11	226.24	264.00	299.48	332.76	363.90	392.96	420.04	445.18	468.46
58	50.56	98.32	143.37	185.82	225.76	263.30	298.50	331.43	362.18	390.81	417.41	442.03	464.73
59	50.54	98.23	143.16	185.45	225.17	262.43	297.29	329.83	360.15	388.29	414.35	438.38	460.45
60	50.52	98.11	142.90	184.99	224.46	261.39	295.86	327.97	357.79	385.39	410.84	434.22	455.60
61	50.48	97.99	142.63	184.49	223.65	260.22	294.28	325.90	355.69	382.17	406.96	429.63	450.26
62	50.45	97.84	142.29	183.88	222.71	258.87	292.46	323.54	352.20	378.53	402.60	424.50	444.30
63	50.41	97.68	141.92	183.22	221.68	257.40	290.46	320.94	348.94	374.54	397.83	418.90	437.85
64	50.36	97.47	141.47	182.44	220.48	255.69	288.17	318.00	345.26	370.07	392.51	412.69	430.71
65	50.30	97.25	141.03	181.64	219.18	253.85	285.69	314.79	341.27	365.22	386.76	405.99	423.03
66	50.20	96.95	140.41	180.66	218.66	251.61	282.56	310.80	336.74	359.65	380.11	398.67	414.56
67	50.00	96.37	139.29	178.80	215.92	247.89	277.87	304.97	329.56	351.24	370.43	387.65	402.40
68	49.78	95.73	138.03	176.77	213.05	243.91	272.75	298.66	322.08	342.40	360.32	376.28	389.78
69	49.54	95.04	136.67	174.58	209.79	239.67	267.34	292.00	314.07	333.18	349.80	364.48	376.76
70	49.29	94.30	135.22	172.24	206.41	235.18	261.64	285.02	305.78	323.58	338.90	352.29	363.36
71	49.00	93.46	133.64	169.76	202.81	230.46	255.67	277.76	297.17	313.65	327.65	339.76	349.64
72	48.69	92.60	132.00	167.15	199.11	225.53	249.45	270.20	288.24	303.35	316.05	326.90	335.73
73	48.38	91.69	130.25	164.39	195.28	220.37	242.94	262.31	278.95	292.69	304.10	313.74	321.38
74	48.04	90.73	128.41	161.49	191.05	214.94	236.11	254.04	269.25	281.64	291.76	300.23	306.81
75	47.66	89.66	126.44	158.48	186.65	209.15	228.63	245.33	259.20	270.14	279.12	286.34	291.92

*AUTHORITY: section 287.650, RSMo 1986.\*  
Original rule filed Dec. 23, 1953, effective  
Jan. 3, 1954. Amended: Filed May 1, 1973,  
effective May 12, 1973.*

*\*Original authority: 287.650, RSMo 1939, amended  
1949, 1961, 1980, 1993, 1995, 1998.*

**8 CSR 50-5.050 Value of \$1 Per Week with  
Interest at 6% of Compensation Past Due**

*PURPOSE: This rule computes compensation  
benefits past due with the value of \$1 per  
week with interest at 6%.*

Compiled by Virgil Rule, formerly assistant  
actuary, Missouri State Insurance Depart-  
ment.



## PRESENT ACCUMULATION TABLE

Weeks	Present Accumulation	Weeks	Present Accumulation	Weeks	Present Accumulation
0		8	\$ 59.9598	6	\$ 123.9460
1	\$ 1.0011	9	61.0282	7	125.0861
2	2.0033	60	62.0977	8	126.2275
3	3.0067	1	63.1684	9	127.3701
4	4.0112	2	64.2404	120	128.5140
5	5.0168	3	65.3135	1	129.6593
6	6.0235	4	66.3879	2	130.8058
7	7.0314	65	67.4634	3	131.9536
8	8.0404	6	68.5402	4	133.1027
9	9.0506	7	69.6182	125	134.2530
10	10.0618	8	70.6973	6	135.4047
1	11.0742	9	71.7777	7	136.5576
2	12.0878	70	72.8593	8	137.7118
3	13.1024	1	73.9421	9	138.8674
4	14.1183	2	75.0262	130	140.0242
15	15.1352	3	76.1114	1	141.1823
6	16.1533	4	77.1979	2	142.3417
7	17.1725	75	78.2855	3	143.5024
8	18.1929	6	79.3744	4	144.6644
9	19.2144	7	80.4645	135	145.8277
20	20.2371	8	81.5559	6	146.9924
1	21.2609	9	82.6484	7	148.1583
2	22.2859	80	83.7422	8	149.3255
3	23.3120	1	84.8372	9	150.4941
4	24.3392	2	85.9335	140	151.6639
25	25.3676	3	87.0309	1	152.8351
6	26.3972	4	88.1296	2	154.0076
7	27.4279	85	89.2296	3	155.1813
8	28.4598	6	90.3307	4	156.3565
9	29.4928	7	91.4331	145	157.5329
30	30.5270	8	92.5368	6	158.7106
1	31.5623	9	93.6416	7	159.8897
2	32.5989	90	94.7478	8	161.0701
3	33.6365	1	95.8551	9	162.2518
4	34.6754	2	96.9637	150	163.4348
35	35.7154	3	98.0735	1	164.6192
6	36.7565	4	99.1846	2	165.8049
7	37.7989	95	100.2969	3	166.9919
8	38.8424	6	101.4105	4	168.1802
9	39.8870	7	102.5253	155	169.3699
40	40.9329	8	103.6414	6	170.5609
1	41.9799	9	104.7587	7	171.7533
2	43.0281	100	105.8773	8	172.9469
3	44.0774	1	106.9971	9	174.1420
4	45.1280	2	108.1182	160	175.3383
45	46.1797	3	109.2406	1	176.5360
6	47.2326	4	110.3642	2	177.7350
7	48.2867	105	111.4890	3	178.9354
8	49.3419	6	112.6151	4	180.1371
9	50.3984	7	113.7425	165	181.3402
50	51.4560	8	114.8712	6	182.5446
1	52.5148	9	116.0011	7	183.7504
2	53.5748	110	117.1323	8	184.9575
3	54.6360	1	118.2647	9	186.1660
4	55.6984	2	119.3984	170	187.3758
55	56.7619	3	120.5334	1	188.5870
6	57.8267	4	121.6697	2	189.7996
7	58.8927	115	122.8072	3	191.0135



PRESENT ACCUMULATION TABLE

Weeks	Present Accumulation	Weeks	Present Accumulation	Weeks	Present Accumulation
0		1	\$ 263.7977	9	\$ 341.4689
4	\$ 192.2287	2	265.0946	290	342.8528
175	193.4454	3	266.3928	1	344.2384
6	194.6634	4	267.6925	2	345.6254
7	195.8827	235	268.9937	3	347.0140
8	197.1034	6	270.2964	4	348.4042
9	198.3255	7	271.6004	295	349.7959
180	199.5490	8	272.9060	6	351.1892
1	200.7738	9	274.2130	7	352.5840
2	202.0001	240	275.5215	8	353.9805
3	203.2277	1	276.8315	9	355.3784
4	204.4567	2	278.1429	300	356.7780
185	205.6870	3	279.4558	1	358.1791
6	206.9187	4	280.7702	2	359.5818
7	208.1518	245	282.0860	3	360.9860
8	209.3863	6	283.4033	4	362.3919
9	210.6222	7	284.7221	305	363.7993
190	211.8594	8	286.0424	6	365.2083
1	213.0981	9	287.3641	7	366.6188
2	214.3381	250	288.6874	8	368.0310
3	215.5795	1	290.0121	9	369.4447
4	216.8223	2	291.3383	310	370.8600
195	218.0665	3	292.6660	1	372.2769
6	219.3121	4	293.9951	2	373.6954
7	220.5591	255	295.3258	3	375.1155
8	221.8075	6	296.6580	4	376.5372
9	223.0573	7	297.9916	315	377.9605
200	224.3085	8	299.3268	6	379.3853
1	225.5611	9	300.6634	7	380.8118
2	226.8151	260	302.0016	8	382.2399
3	228.0705	1	303.3413	9	383.6696
4	229.3273	2	304.6825	320	385.1008
205	230.5855	3	306.0252	1	386.5337
6	231.8452	4	307.3694	2	387.9682
7	233.1062	265	308.7151	3	389.4043
8	234.3687	6	310.0623	4	390.8420
9	235.6325	7	311.4111	325	392.2813
210	236.8977	8	312.7613	6	393.7222
1	238.1644	9	314.1131	7	395.1648
2	239.4324	270	315.4664	8	396.6089
3	240.7019	1	316.8212	9	398.0547
4	241.9728	2	318.1775	330	399.5021
215	243.2452	3	319.5351	1	400.9511
6	244.5190	4	320.8947	2	402.4018
7	245.7942	275	322.2555	3	403.8541
8	247.0708	6	323.6180	4	405.3080
9	248.3488	7	324.9819	335	406.7635
220	249.6283	8	326.3474	6	408.2207
1	250.9092	9	327.7144	7	409.6795
2	252.1916	280	329.0829	8	411.1399
3	253.4754	1	330.4529	9	412.6020
4	254.7606	2	331.8245	340	414.0657
225	256.0473	3	333.1977	1	415.5310
6	257.3354	4	334.5724	2	416.9980
7	258.6250	285	335.9486	3	418.4667
8	259.9160	6	337.3263	4	419.9370
9	261.2085	7	338.7056	345	421.4089
230	262.5024	8	340.0865	6	422.8825



## PRESENT ACCUMULATION TABLE

Weeks	Present Accumulation	Weeks	Present Accumulation	Weeks	Present Accumulation
7	\$ 424.3577	405	\$ 512.8124	3	\$ 607.2059
8	425.8346	6	514.3884	4	608.8877
9	427.3132	7	515.9662	465	610.5715
350	428.7934	8	517.5458	6	612.2571
1	430.2752	9	519.1272	7	613.9447
2	431.7588	410	520.7103	8	615.6341
3	433.2439	1	522.2952	9	617.3254
4	434.7308	2	523.8819	470	619.0186
355	436.2193	3	525.4704	1	620.7137
6	437.7095	4	527.0606	2	622.4107
7	439.2014	415	528.6527	3	624.1096
8	440.6949	6	530.2465	4	625.8104
9	442.1901	7	531.8421	475	627.5131
360	443.6870	8	533.4395	6	629.2177
1	445.1856	9	535.0386	7	630.9242
2	446.6858	420	536.6396	8	632.6326
3	448.1877	1	538.2423	9	634.3430
4	449.6913	2	539.8469	480	636.0553
365	451.1966	3	541.4532	1	637.7694
6	452.7036	4	543.0614	2	639.4856
7	454.2123	425	544.6714	3	641.2036
8	455.7226	6	546.2831	4	642.9236
9	457.2347	7	547.8967	485	644.6455
370	458.7484	8	549.5121	6	646.3693
1	460.2639	9	551.1292	7	648.0950
2	461.7810	430	552.7482	8	649.8227
3	463.2998	1	554.3691	9	651.5523
4	464.8204	2	555.9917	490	653.2839
375	466.3426	3	557.6161	1	655.0174
6	467.8666	4	559.2424	2	656.7529
7	469.3922	435	560.8705	3	658.4903
8	470.9196	6	562.5004	4	660.2296
9	472.4487	7	564.1322	495	661.9709
380	473.9795	8	565.7658	6	663.7141
1	475.5120	9	567.4012	7	665.4593
2	477.0463	440	569.0384	8	667.2065
3	478.5822	1	570.6775	9	668.9556
4	480.1199	2	572.3184	500	670.7067
385	481.6593	3	573.9612	1	672.4597
6	483.2004	4	575.6058	2	674.2147
7	484.7433	445	577.2522	3	675.9717
8	486.2879	6	578.9005	4	677.7307
9	487.8342	7	580.5506	505	679.4916
390	489.3822	8	582.2026	6	681.2545
1	490.9320	9	583.8565	7	683.0193
2	492.4835	450	585.5122	8	684.7862
3	494.0368	1	587.1697	9	686.5550
4	495.5918	2	588.8291	510	688.3258
395	497.1486	3	590.4904	1	690.0986
6	498.7071	4	592.1535	2	691.8734
7	500.2673	455	593.8185	3	693.6502
8	501.8293	6	595.4854	4	695.4289
9	503.3930	7	597.1541	515	697.2097
400	504.9585	8	598.8247	6	698.9924
1	506.5258	9	600.4972	7	700.7772
2	508.0948	460	602.1715	8	702.5639
3	509.6655	1	603.8479	9	704.3527
4	511.2381	2	605.5259	520	706.1435



*AUTHORITY: section 287.650, RSMo 1986.\* Original rule filed May 1, 1973, effective May 12, 1973.*

*\*Original authority: 287.650, RSMo 1939, amended 1949, 1961, 1980, 1993, 1995, 1998.*

### 8 CSR 50-5.060 Evaluation of Hearing Impairment

*PURPOSE: The purpose of this rule is to establish the procedures to evaluate hearing impairment, setting forth methods for its measurement and calculation.*

(1) The Division of Workers' Compensation makes grateful acknowledgment for scientific advisory assistance in the preparation of this rule to the Central Institute for the Deaf, 818 South Euclid, St. Louis, Missouri, in particular to Dr. Hallowell Davis, its director of research, for his/her counsel and guidance, and to Dr. S. Richard Silverman, its director, who made available his/her own time and help and that of his highly qualified staff.

(2) The following are definitions relating to this matter and rule:

(A) Hearing loss—the general condition of reduced auditory sensitivity;

(B) Loss of hearing or threshold shift—a change for the worse in auditory sensitivity;

(C) Threshold—the weakest sound that can be heard;

(D) Decibel—a unit conventionally used to measure the magnitude of sound. In the testing of hearing, it is used to measure the threshold of a listener relative to the standard threshold (U.S. audiometers);

(E) Audiometer—a device for the measurement of the threshold of hearing in decibels relative to a standard;

(F) Hearing level or hearing threshold level—the reading on an audiometer in decibels corresponding to the threshold of hearing of the individual being tested;

(G) Frequency—the number of regular fluctuations made by a sound wave in one (1) second;

(H) Cycle—one (1) of a repeated series of regular fluctuations made by a sound wave;

(I) Audiogram—a chart showing hearing levels at different frequencies;

(J) Hearing impairment or impairment of hearing—a malfunction or abnormality of hearing of sufficient severity to constitute a practical handicap such as would justify compensation; particularly a reduction of efficiency in everyday communication by speech;

(K) Deafness—term reserved to designate very severe or total impairment of hearing; and

(L) Presbycusis—a loss of hearing occasioned by the aging process.

(3) Weeks of compensation for hearing loss due to a traumatic incident (that is, a single accident such as an explosion, a blast or a blow on the head) shall be those provided in items 27 and 28 of subsection 1 of section 287.190, RSMo.

(4) Weeks of compensation for hearing loss due to prolonged exposure to harmful noise in employment (that is, an occupational disease) shall be those provided in subsection 3 of section 287.197, RSMo.

(5) Either traumatic hearing loss(es) due to occupational disease shall be measured as prescribed in section 287.197, RSMo and this rule.

(6) When both ears show hearing impairment, the computation of impairment shall be on the basis of binaural loss as provided in subsection 5 of section 287.197, RSMo.

(7) Liability for occupational hearing loss occurs only when an employee has been exposed to the hazard of such loss for a period of ninety (90) days or longer and becomes exclusively that of the employer in whose employment such exposure took place (section 287.063-5).

(8) Each employer is liable for all of the occupational hearing loss to which his/her employment contributed, subject to the limitations of the measurement of hearing loss provisions, but no employer is liable for hearing loss sustained prior to employment with him/her nor for any hearing loss for which compensation previously was awarded or paid (section 287.197-8).

(9) The date of disability of occupational hearing loss is the last day of a six (6)-month period following separation from the employment in which the employee was exposed to harmful noise (section 287.197-7).

(10) Claim for compensation for occupational hearing loss, if maintained, must be made within one (1) year of the date of disability, as defined in section (9) of this rule. The provision of medical attention and/or the payment of compensation will toll the statute, as in other workers' compensation cases (section 287.197-7).

(11) Only pure-tone air-condition audiometric instruments that meet the standards set by recognized authorities shall be used to mea-

sure hearing levels. The reference zero levels of the audiometer used for measuring hearing levels must be explicitly identified either as ASA-1951 (as given in USASI Standard for General Diagnostic Purposes, Z24.5-1951, United States of America Standards Institute, New York 1951) or as ISO (as given in International Organization of Standardization Recommendation R 389, Standard Reference Zero for the calibration of pure-tone audiometers). The corresponding identification must be attached to every decibel value of a hearing level employed in the evaluation of hearing impairment.

(12) In the evaluation of hearing impairment, only the hearing levels at the frequencies of five hundred (500), one thousand (1000) and two thousand (2000) cycles per second shall be considered; provided, however, that if a subject does not hear the test tone at the ninety-five (95) decibel hearing level in any or all of the three (3) frequencies, the value of one hundred (100) decibels shall be used for such frequency(ies) in calculating the average hearing level.

(13) Three (3) separate audiograms, each on different days, shall be made including at least the frequencies of five hundred (500), one thousand (1000) and two thousand (2000) cycles per second and the lowest hearing level measured at each of the three (3) frequencies shall be used for the computation of hearing impairment. The lowest hearing level at each of the three (3) frequencies shall be added together and the sum divided by three (3) to determine the average hearing level in decibels. If the audiograms show a lowest hearing level at any of these three (3) frequencies that is greater than one hundred (100) decibels, or else no response at all, the value of one hundred (100) dB shall be used for the level at such frequencies in calculating the average hearing level.

(14) In order to allow for the average amount of hearing loss due to nonoccupational causes found in the population at any given age (including presbycusis), there shall be deducted from the average hearing level one-half (1/2) decibel for each year of the employee's age over forty (40) at the time of his/her last exposure to industrial noise. The result shall be termed the corrected average hearing level.

(15) For every decibel that the corrected average hearing level exceeds fifteen (15) decibels based on the ASA-1951 reference levels or twenty-six (26) decibels based on the ISO



reference levels, an allowance of one and one-half percent (1 1/2%) shall be made up to the maximum of one hundred percent (100%) which is reached at eighty-two (82) decibels based on the ASA-1951 reference levels and at ninety-three (93) decibels based on the ISO reference levels. The allowance thus calculated is the monaural percentage impairment of hearing in that ear.

(16) Binaural impairment of hearing shall be determined by multiplying the percentage of impairment in the better ear by five (5), to which result is added the percentage of impairment in the poorer ear and dividing the sum of the two (2) by six (6). The result is the evaluation in percentage of binaural hearing impairment.

(17) No consideration shall be given to the question of whether or not the ability of an employee to understand speech is improved by the use of a hearing aid.

(18) An employee may work in successive employments where s/he is exposed to harmful noise and sustain an accumulated hearing loss, only a part of which may be the liability of the last employer. Section 287.197-8, RSMo provides that an employer is liable only for the hearing loss to which his/her employment contributed, which provision requires a rule for the calculation of such proportional liability. The rule applies only to the first employer in whose employ the employee develops a compensable hearing impairment. Each subsequent employer who hires an individual who already has some hearing impairment is liable only for the additional impairment that develops in his/her employ, subject to the correction according to age.

(19) The best level of hearing at each of the three (3) frequencies of five hundred (500), one thousand (1000) and two thousand (2000) cycles per second is determined by selection from all available audiogram(s) made within six (6) months prior to or three (3) months after the date of employment, but in any case prior to work in a noisy environment. Earlier audiogram(s) may be used for this purpose only if none is available that were made during that nine (9)-month period.

(20) The pre-employment average hearing level for the three (3) frequencies is calculated for each ear (section (13) of this rule). If the decibel values are based on the ISO reference, zero (0) levels eleven (11) decibels shall be subtracted from the average hearing level to convert it to its ASA-1951 equivalent.

The remainder of this section remains as originally written in terms of the ASA-1951 reference levels.

(21) The correction for nonoccupational hearing loss (section (14) of this rule) is applied by subtracting from the average hearing level for each ear one-half (1/2) decibel for each year of the employee's age over forty (40) at the time of his/her employment.

(22) Now if the corrected average hearing level of the pre-employment audiogram(s) in either ear exceeds fifteen (15) decibels, the percentage of binaural impairment is calculated as in sections (15) and (16) of this rule. The employer is liable for the difference in percentage of impairment between this value and the percentage of binaural hearing impairment calculated from post-employment hearing tests.

(23) But if the corrected average hearing level of the pre-employment audiogram(s) does not exceed fifteen (15) decibels in either ear, the corrected pre-employment averages are subtracted from the corresponding corrected post-employment averages for each ear. The difference (that is, the threshold shift during employment corrected for the age factor) is divided by the corrected post-employment average hearing level for each ear. This fraction represents the employer's share of liability for the impairment of hearing in that ear at the date of disability.

(24) The percentage of impairment of hearing in each ear is multiplied by the fraction calculated for that ear to give the percentages of impairment in each ear for which the employer is liable. The binaural percentage of impairment for which the employer is liable is then calculated according to section (16) of this rule.

*AUTHORITY: section 287.650, RSMo 1986. \* Original rule filed Sept. 11, 1959, effective Sept. 22, 1959. Amended: Filed Aug. 18, 1967, effective Aug. 29, 1967.*

*\*Original authority: 287.650, RSMo 1939, amended 1949, 1961, 1980, 1993, 1995, 1998.*

### 8 CSR 50-5.070 Forms

*PURPOSE: This rule sets forth the forms required for filing with the division by the employee, employer and insurer. Included are instructions to obtain forms.*

Forms required for filing with the division are listed in this rule, together with a few

other forms required of employees, employers and insurers. Under the provisions of section 287.630, RSMo, these forms are provided free of charge. Those requiring such forms should send their requests to the division at Jefferson City, giving the form serial number and the quantity needed. Some forms, such as subpoenas and Forms 42 and 43, which have to be executed separately for individual cases, cannot, of course, be sent out in quantities. The only cost in connection with procuring the forms is transportation charges.

Form No.	Use
1	Report of Injury
2	Receipt and Notice of Termination of Compensation
2-A	Receipt for Compensation
3	Notice of Commencement of Compensation
6	Notice of Termination of Compensation
8	Request for Lump Sum Settlement
9	Surgeon's Report
9-A	Physician's Report on Eye Injuries
21	Claim for Compensation
22	Answer to Claim for Compensation
25	Subpoena
25-A	Subpoena Duces Tecum
42	Special Order for Additional Medical
43	Authorization to Inspect and/or Copy Medical Records
65-B	Withdrawal of Employer's Acceptance of Law
75	Memorandum of Insurance Coverage
8	Application for Authority to Self-Insure
82 (Bond)	Bond of Self-Insurer
82 (Escrow)	Escrow Agreement of Self-Insurer
83	Self-Insurer's Statement of Outstanding Disability Claims
84	Self-Insurer's Payroll Report
85	Self-Insurer's Annual Financial Statement
86	Self-Insurer's Report of Compensation Payments

*AUTHORITY: section 287.650, RSMo 1986. \* Original rule filed Aug. 26, 1975, effective Sept. 5, 1975.*

*\*Original authority: 287.650, RSMo 1939, amended 1949, 1961, 1980, 1993, 1995, 1998.*